



08/08/06 3382-65133-01 558925.doc 300282.02

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Re application of:** Thumpudi et al.

**Application No.** 10/642,550

**Filed:** August 15, 2003

**Confirmation No.** 4585

**For:** MULTI-CHANNEL AUDIO ENCODING  
AND DECODING

**Examiner:** Not yet assigned

**Art Unit:** 2641

**Attorney Reference No.** 3382-65133-01

**CERTIFICATE OF MAILING**

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney or Agent  
for Applicant(s)

Date Mailed August 9, 2006

**INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 C.F.R. § 1.97(b)(3)**

COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Copies of United States patents and United States published patent applications do not have to be provided to the Patent Office (37 C.F.R. 1.98(a)(2)(ii)). Copies of unpublished U.S. applications do not have to be provided, as long as the application is available on PAIR, as this requirement of 37 C.F.R. § 1.98(a)(2)(iii) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on October 19, 2004 (1287 OG 163). Applicants will provide copies of such patents or applications upon request.

Applicants filed this Information Disclosure Statement ("IDS") before the mailing date of a first Office action on the merits. As a result, no fee should be required to file this IDS. However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this Information Disclosure Statement is enclosed.

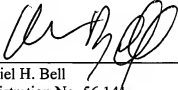
The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.


Respectfully submitted,

KLARQUIST SPARKMAN, LLP

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 595-5300  
Facsimile: (503) 595-5301  
cc: Client  
Docketing

By

  
Daniel H. Bell  
Registration No. 56,141

	<b>Attorney Docket Number</b>	3382-65133-01
	<b>Application Number</b>	10/642,550
	<b>Filing Date</b>	August 15, 2003
	<b>First Named Inventor</b>	Thumpudi
	<b>Art Unit</b>	2641
	<b>Examiner Name</b>	Not yet assigned

### U.S. PATENT DOCUMENTS

Copies of U.S. Patent documents do not need to be provided, unless requested by the Patent and Trademark Office. For patents, provide the patent number and the issue date. For published U.S. applications, provide the publication number and the publication date. For unpublished pending patent applications, provide the application number and the filing date.

Examiner's Initials*	Cite No. (optional)	Number	Issue Date	Name of Applicant or Patentee
/JR/		5,524,054	06-1996	Spille
/JR/		5,629,780	05-1997	Watson
/JR/		5,661,823	08-1997	Yamauchi et al.
/JR/		5,682,152	10-1997	Wang et al.
/JR/		5,701,346	12-1997	Herre et al.
/JR/		5,812,971	09-1998	Herre
/JR/		5,835,030	11-1998	Tsutsui et al.
/JR/		5,974,380	10-1999	Smyth et al.
/JR/		6,041,295	03-2000	Hinderks
/JR/		6,064,954	05-2000	Cohen et al.
/JR/		6,249,614	06-2001	Kolesnik et al.
/JR/		6,393,392	09-2002	Minde
/JR/		6,445,739	09-2002	Shen et al.
/JR/		6,658,162	12-2003	Zeng et al.
/JR/		6,738,074	05-2004	Rao et al.

<b>EXAMINER SIGNATURE:</b> /Justin Rider/	<b>DATE CONSIDERED:</b> 04/02/2007
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Attorney Docket Number	3382-65133-01
Application Number	10/642,550
Filing Date	August 15, 2003
First Named Inventor	Thumpudi
Art Unit	2641
Examiner Name	Not yet assigned

## FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
/JR/		Europe	EP 0597649	05-1994	Suzuki
/JR/		Europe	EP 0669724	08-1995	Akagiri
/JR/		WIPO	WO 99/43110	08-1999	Absar et al.

## OTHER DOCUMENTS

Examiner's Initials*	Cite No. (optional)	
/JR/		Bier, "Digital Audio Compression: Why, What, and How," © 2000-2002 Berkeley Design Technology, Inc., 12/2/2002, 15 pages.
/JR/		Bosi et al., "ISO/IEC MPEG-2 Advanced Audio Coding," Journal of the Audio Engineering Society, Audio Engineering Society, Vol. 45, No. 10, pages 789-812 (1997).
/JR/		Brandenburg, "MP3 and AAC Explained," AES 17th International Conference on High Quality Audio Coding, 1999, 12 pages.
/JR/		Gibson et al., Digital Compression for Multimedia, Title Page, Contents, "Chapter 8: Frequency Domain Speech and Audio Coding Standards," Morgan Kaufman Publishers, Inc., pp. 263-290 (1998).
/JR/		Gillespie et al., "Speech dereverberation via maximum-kurtosis subband adaptive filtering," Proc. IEEE ICASSP, 2001, pp. 3701-3704.
/JR/		Herre, "From Joint Stereo to Spatial Audio Coding - Recent Progress and Standardization," Proc. Of the 7th Int. Conference on Digital Audio Effects (DAFx'04), 2004, pages 157-162.
/JR/		Herre et al., "Intensity Stereo Coding," presented at AES 96th Convention, 1994, 11 pages.
/JR/		ISO/IEC 13818-7, Information technology - Generic coding of moving pictures and associated audio information - Part 7: Advanced Audio Coding (AAC), 150 pp. (1997).
/JR/		Püschel et al., "The Algebraic Approach to the Discrete Cosine and Sine Transforms and their Fast Algorithms," SIAM Journal of Computing 2003, Vol. 32, No. 5, pp. 1280-1316.
/JR/		"Radio Engineering," authored by KPR i-Services, Inc., printed from internet on 12/13/2005, 3 pages.
/JR/		Schroeder, "'Colorless' Artificial Reverberation," presented at Audio Engineering Society 12th Annual Meeting, 1960, 18 pages.
/JR/		Schroeder, "Natural Sounding Artificial Reverberation," presented at the Audio Engineering Society 13th Annual Meeting, 1961, 18 pages.
/JR/		Search Report for European Patent Application No. 03 020 110.7, March 23, 2006

EXAMINER  
SIGNATURE:

/Justin Rider/

DATE

04/02/2007

CONSIDERED:

\* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Attorney Docket Number	3382-65133-01
		Application Number	10/642,550
		Filing Date	August 15, 2003
		First Named Inventor	Thumpudi
		Art Unit	2641
		Examiner Name	Not yet assigned
<b>Examiner's Initials*</b>	<b>Cite No. (optional)</b>	<b>OTHER DOCUMENTS</b>	
/JR/		Search Report for European Patent Application No. 03 020 111.5. March 28, 2006	
/JR/		"Smart Project - Algebraic Theory of Signal Processing," <a href="http://www.ece.cmu.edu/~smart/papers/dttaglo.html">http://www.ece.cmu.edu/~smart/papers/dttaglo.html</a> , printed from internet on 6/30/2006, 2 pages.	
/JR/		Smith, "Physical Audio Signal Processing: for Virtual Musical Instruments and Digital Audio Effects," (Global Contents - 13 pages, Allpass Filters - 2 pages, Schroeder Allpass Sections - 2 pages, and A Schroeder Reverberator called JCRev - 2 pages) of online book at <a href="http://ccrma.stanford.edu/~jos/pasp/">http://ccrma.stanford.edu/~jos/pasp/</a> , Center for Computer Research in Music and Acoustics (CCRMA), Stanford University, printed from internet on 12/20/2005, 19 pages.	

EXAMINER SIGNATURE: /Justin Rider/	DATE CONSIDERED: 04/02/2007
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	